MEDIA RELEASE

BIUST TO COORDINATE NETWORK FOR ZERO- DEFECT AND ZERO- WASTE DIGITAL MANUFACTURING FOR ELECTRIC VEHICLES COMPONENTS (NeDMEV) PARTENRSHIP

For Immediate Release

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The Botswana International University of Science & Technology (BIUST) is proud to announce that the Network for Zero-defect and Zero-waste Digital Manufacturing (DM) for Electric Vehicles' Components (NeDMEV) partnership, an initiative derived from the Education for Laser-based Manufacturing (ELbM) consortium, has been awarded € 1,793,760 funding. The funding will be utilized to upskill African advanced manufacturing (AM) postgraduate research students with expertise in mitigating climate change via practical application of digital manufacturing (DM) processes in achieving defect- and waste-free products. The goal is to drive the transformation of African economies, particularly in Botswana, South Africa, Ghana, and Kenya, towards promoting a knowledge-based society while training a critical mass of DM engineers.

The project coordinated by the BIUST through the UNESCO Chair on Sustainable Manufacturing & Innovation Technologies (UCoSMIT): Associate Professor Eyitayo Olatunde Olakanmi has now increased the total number of postgraduate scholarships for training a critical mass of advanced manufacturing engineers under the UCoSMIT portfolio to 34. This partnership comprises of esteemed African & European research-intensive institutions namely the Kenya's Jomo Kenyatta University of Agriculture & Technology (JKUAT), Ghana's Pentecost University (PENTVARS), South Africa's Nelson Mandela University (NMU), H & H Industries, and Council for Scientific & Industrial Research (CSIR) and Italy's University of Bologna.

The project expected to run from January 1 2024, until December 31 2027 will engage community of practice (CoP) to (i) increase the employability of 48 scholars/trainees in green jobs by engaging soft skills and digital manufacturing (DM) to achieve zero-defect and zero-waste production of electric vehicle (EV) components; (ii) improve the quality, relevance, internationalisation, and climate change focus of NeDMEV HEIs through 12 staff exchange fellows; and (iii) increase the level of cooperation among NeDMEV HEIs/Associated partners including the European technical partner to establish additional projects focusing on climate change mitigation and creation of green jobs.

Furthermore NeDMEV interdisciplinary consortium carries out responsive activities which promote socio-economic recovery, growth, and prosperity by (i) removing the disconnection between manufacturing needs of the industrial and academic research; (ii) developing experts skillful in engaging big data science (BDS) and artificial intelligence (AI) including machine learning (ML), in analysing the cause-effect variation in the research; and (iii) mentoring young academics in grant proposal writing and project management. Finally, NeDMEV ensures equity and inclusion, system strengthening and capacity building as well as employability by imparting participants with skills in DM of EV components while strengthening partners' wider economic and social ecosystems as it embeds innovation into EV manufacturing research via business involvement to maximize societal impact.

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